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Lonza

Lonza Group Ltd
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Press Release

Lonza and bluebird bio, Inc., Establish a Long-term Commercial Manufacturing Agreement for Lenti-D™ and LentiGlobin™ Drug Products

Basel (CH) and Cambridge, MA (USA), 9 June 2016 – Lonza Houston, Inc., a global leader in viral gene and cell therapy manufacturing, and bluebird bio, Inc., a clinical-stage company committed to developing potentially transformative gene therapies for severe genetic diseases and T cell-based immunotherapies for cancer, have entered into a strategic manufacturing agreement providing for the future commercial production of bluebird bio's Lenti-D™ and LentiGlobin™ drug products.

This agreement follows a successful multi-year clinical manufacturing relationship and provides bluebird bio with a path to commercial supply including dedicated production suites within Lonza's state-of-the-art facility. This facility is currently under construction, for the clinical and commercial supply of viral vectors and virally-modified cell therapy products.

Under this multi-year agreement, Lonza will complete the suite design, construction and validation along with process validation prior to anticipated commercial launch.

"This new strategic relationship with bluebird bio, is an example of Lonza's ability to be a long-term commercial partner to the cell & viral therapy industry," said Marc Funk, COO, Lonza's Pharma & Biotech segment. "Our global facilities, regulatory track record and security of supply offer customers like bluebird bio a reliable strategic manufacturing partner for the lifetime of their therapeutic drugs."

"As we advance our gene therapy programs through clinical trials, we are deliberately building key infrastructure and relationships in preparation for commercial launch," said Nick Leschly, chief bluebird. "Our partnership with Lonza is one notable example of our progress on the manufacturing front, and we are pleased to benefit from their expertise and experience as we continue working to bring transformative therapies to patients in need."

About Lonza

Lonza is one of the world's leading and most-trusted suppliers to the pharmaceutical, biotech and specialty ingredients markets. We harness science and technology to create products that support safer and healthier living and that enhance the overall quality of life.

Not only are we a custom manufacturer and developer, Lonza also offers services and products ranging from active pharmaceutical ingredients and stem-cell therapies to drinking water sanitizers, from the vitamin B3 compounds and organic personal care ingredients to agricultural products, and from industrial preservatives to microbial control solutions that combat dangerous viruses, bacteria and other pathogens.



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Founded in 1897 in the Swiss Alps, Lonza today is a well-respected global company with more than 40 major manufacturing and R&D facilities and approximately 9,800 full-time employees worldwide. The company generated sales of about CHF 3.8 billion in 2015 and is organized into two market-focused segments: Pharma&Biotech and Specialty Ingredients. Further information can be found at www.lonza.com

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About bluebird bio, Inc.

With its lentiviral-based gene therapies, T cell immunotherapy expertise and gene editing capabilities, bluebird bio has built an integrated product platform with broad potential application to severe genetic diseases and cancer. bluebird bio's gene therapy clinical programs include its Lenti-D™ product candidate, currently in a Phase 2/3 study, called the Starbeam Study, for the treatment of cerebral adrenoleukodystrophy, and its LentiGlobin™ BB305 product candidate, currently in three clinical studies for the treatment of transfusion-dependent β -thalassemia, and severe sickle cell disease. bluebird bio's oncology pipeline is built upon the company's leadership in lentiviral gene delivery and T cell engineering, with a focus on developing novel T cell-based immunotherapies, including chimeric antigen receptor (CAR T) and T cell receptor (TCR) therapies. bluebird bio's lead oncology program, bb2121, is an anti-BCMA CAR T program partnered with Celgene. bb2121 is currently being studied in a Phase 1 trial for the treatment of relapsed/refractory multiple myeloma. bluebird bio also has discovery research programs utilizing megaTALs/homing endonuclease gene editing technologies with the potential for use across the company's pipeline.

bluebird bio has operations in Cambridge, Massachusetts, Seattle, Washington, and Paris, France.

LentiGlobin and Lenti-D are trademarks of bluebird bio, Inc.

bluebird bio Inc., Forward-Looking Statements

This release contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, including statements regarding bluebird bio's product candidates and plans for their commercial manufacture. Any forward-looking statements are based on management's current expectations of future events and are subject to a number of risks and uncertainties that could cause actual results to differ materially and adversely from those set forth in or implied by such forward-looking statements. These risks and uncertainties include, but are not limited to, risks that the preliminary results from our clinical trials will not continue or



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be repeated in our ongoing clinical trials, the risk that previously conducted studies involving similar product candidates will not be repeated or observed in ongoing or future studies involving current product candidates, the risk of cessation or delay of any of the ongoing or planned clinical studies and/or our development of our product candidates, the risk of a delay in the enrollment of patients in our clinical studies and the risk that any one or more of our product candidates will not be successfully developed and commercialized. For a discussion of other risks and uncertainties, and other important factors, any of which could cause our actual results to differ from those contained in the forward-looking statements, see the section entitled "Risk Factors" in our most recent quarterly report on Form 10-Q, as well as discussions of potential risks, uncertainties, and other important factors in our subsequent filings with the Securities and Exchange Commission. All information in this press release is as of the date of the release, and bluebird bio undertakes no duty to update this information unless required by law.

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Additional Information and Disclaimer

Lonza Group Ltd has its headquarters in Basel, Switzerland, and is listed on the SIX Swiss Exchange. It has a secondary listing on the Singapore Exchange Securities Trading Limited ("SGX-ST"). Lonza Group Ltd is not subject to the SGX-ST's continuing listing requirements but remains subject to Rules 217 and 751 of the SGX-ST Listing Manual.

Certain matters discussed in this news release may constitute forward-looking statements. These statements are based on current expectations and estimates of Lonza Group Ltd, although Lonza Group Ltd can give no assurance that these expectations and estimates will be achieved. Investors are cautioned that all forward-looking statements involve risks and uncertainty and are qualified in their entirety. The actual results may differ materially in the future from the forward-looking statements included in this news release due to various factors. Furthermore, except as otherwise required by law, Lonza Group Ltd disclaims any intention or obligation to update the statements contained in this news release.